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When a Rig Moves In Next Door

By CLIFFORD KRAUSS and TOM ZELLER Jr.

IN the sparsely populated pastures of De Soto Parish in Louisiana, the ability to extract gas from shale — which can involve a process known as fracking — has been welcomed as an economic windfall. Some residents call it a gift from God.

But 1,400 miles to the north, in Susquehanna County in Pennsylvania, shale gas development has divided neighbors, spurred lawsuits and sown deep mistrust. Along Grove Avenue in Montrose, the county seat, a billboard looms overhead, advertising the services of a personal-injury law firm. “HURT by DRILLING?” it asks.

Natural gas currently satisfies nearly a quarter of the nation’s power needs. And with vast methane reserves now available in previously inaccessible layers of shale deep underground, its position as a cornerstone of the domestic energy supply may well be secured for decades — if the public supports it.

Support for drilling has proved fairly easy in many states, including Louisiana, Texas and Arkansas. But it has met with major resistance in the Northeast. In Pennsylvania, lawsuits over drinking water and other potential environmental issues are driving up production costs on what is known as the Marcellus Shale, and the governor recently ordered a moratorium on new drilling permits in state forests.

Jerry Dugas, a veteran driller originally from Louisiana, is now a well superintendent for Cabot Oil and Gas in Pennsylvania. “They have been drilling oil and gas wells in the South for the last 100 years,” he says. “Everyone there is accustomed to seeing all of this stuff and they understand what’s going on, so it’s nothing new. That’s the environment I grew up in.”

“Once I came up here,” he adds, “it became real clear to me real quick that this is a whole other animal.”

The differences between De Soto and Susquehanna, both historically poor locales that are now rich fountains of natural gas, arise from a mixture of culture, geography and history. Understanding those differences may prove nearly as important as geology in determining how much gas will ultimately be produced — and at what cost.

BILL WILLIAMSON, a retired telephone factory worker, relaxes in a rocking chair on the porch of his farmhouse in Stonewall, a town in north-central De Soto Parish. The town sits 10,000 to 13,000 feet above a rich underground gas deposit known as the Haynesville Shale.

A gas rig operated by Encana, the Canadian gas giant, was busy drilling just beyond Mr. Williamson’s front yard.

“God made everything,” he says, reflecting on the rig. “He made the minerals in the ground and the trees on top of the ground, and he put them there for a purpose. It’s in our best interest to use the resources.”

Mr. Williamson and his wife, Nancy, a retired nurse, live on 34 acres of mostly grazing land. An air horn blows loudly at the nearby gas rig. But the Williamsons, who, like most of their neighbors, earn tidy incomes from gas drillers’ leasing their land, don’t seem to notice.

Oil and gas booms — and subsequent busts — have been common in De Soto for much of the last 100 years, and the economy has struggled since cotton farming gave way to dairy farming, which then gave way to logging and paper mills.

By the 2000s, De Soto, with a population of about 28,000, was one of the poorest parishes in the state.

Then came the shale.

“People went to bed one night poor and woke up the next day rich, enabled to buy a Cadillac and pay cash,” said Mayor Curtis McCoy of Mansfield, the parish seat. “It’s kind of like the show ‘The Beverly Hillbillies.’ ”

Farmers who once lived check to check are now extremely comfortable, if not downright wealthy. New cars, recreational vehicles and trailers are parked in nearly every driveway. Vinyl siding has been applied to weather-beaten cottages and clapboard houses.

Homeowners have typically earned signing bonuses of \$350 to as much as \$30,000 an acre from the gas companies, as well as royalties that can last for decades. Many earned additional hefty checks for giving right of way to piping companies.

And many more are digging ponds on their properties to supply the gas companies with the water they need to perform hydraulic fracturing, or fracking, a process involving the high-pressure injection of water, sand and chemicals deep underground to break up shale formations and release their stores of gas.

The technique is credited with unlocking gas deposits that would otherwise not be accessible. It is also a source of environmental worries.

The Haynesville area has not been spared from drilling accidents, experiencing several over the last two years that might make residents howl in some other parts of the country.

Nearly 150 homes had to be evacuated in the neighboring Caddo Parish in April, when drillers of an Exco Resources well struck a shallow pocket of gas, causing a blowout. Exco says methane was already in the drinking water, and suggests that further study is needed to determine whether some gas came from the well.

A year earlier, 16 cattle were found dead near a Chesapeake Energy well site, apparently after they drank chemicals used by drillers that had flooded off a well pad during a storm. Since then, the company says it has changed its practices to contain similar spills if they occur.

The events received attention in national news media, but provoked little local worry.

“There was no reaction, really,” said Charlie Waldon, the mayor of the tiny town of Stonewall. As vice president of the parish water board, Mr. Waldon worries that the gas industry will deplete the parish’s

precious groundwater supply, and he is frustrated that his constituents don't share his concern.

"It's going to take something major to wake them up," he says.

Many of his constituents, though, say their eyes are wide open. They point to local sales tax revenue, which has gone up so much since the shale gas boom began that the North De Soto Upper Elementary School has been able to buy 96 new computers as well as other equipment — even as the state cut education funds amid the economic downturn. Salaries for first-year teachers in the parish have risen to \$49,000 from \$35,000.

As for possible environment effects, "we're all concerned," said Brandon Burback, principal of the school, where a giant copy of an \$18,000 check from Encana is displayed prominently in the lobby. He acknowledged the risk that a nearby well could blow out, causing a leak of natural gas.

But Mr. Burback said parents and faculty members felt better after Encana contracted a company to work out an evacuation plan in case of an emergency. "We tend to fear what we don't know much about," he said, "but they have made an effort to educate and reduce the amount of fear."

MARLENE DEAN, 58, has lived her entire life on the same rural property on Route 92 in South Gibson, Pa., in the heart of Susquehanna County. For nearly all of that time, she and her family drew their drinking water from a well.

In 2008, that changed.

In the spring of that year, the Southwestern Energy Company, an oil and gas business based in Houston, began work on a shale gas well on a neighbor's property across the road.

Gas cash was flowing freely by then, as landowners signed contracts to lease their land. Some agreed to allow drilling directly on their property, with some deals reaching \$5,000 an acre. Other landowners, including Mrs. Dean, cashed in by leasing their mineral rights, permitting gas companies to drill and frack horizontally under their properties.

Residents welcomed the influx of cash. Situated at the eastern edge of the Endless Mountains and bordering the Southern Tier of New York, Susquehanna County has traditionally ranked among Pennsylvania's poorest counties. Much of its population of 40,000 long relied on agriculture, blue stone quarrying and light manufacturing to make a living.

In May, an industry-financed study conducted by the College of Earth and Mineral Sciences at Pennsylvania State University estimated that gas companies had spent \$4.5 billion developing the Marcellus in Pennsylvania, generating \$389 million in state and local tax revenue and more than 44,000 jobs.

Mrs. Dean, for one, received \$500 for the mineral rights under her one acre of land, and signed another deal to collect a 12.5 percent cut of royalties arising from the well across the road, whenever it started production.

Rowena Shager of South Gibson was another beneficiary. By 2007, she had negotiated a nearly \$20,000 deal to lease her 57 acres. "I was going through a divorce at the time, and I really needed the money," she said.

But by the fall of 2008, homes around the well began producing muddy water at the faucet, she said. Mrs. Shager, Mrs. Dean and a dozen other nearby residents contended, among other things, that Southwestern — through sloppy operations — somehow managed to pollute their water with drilling or fracking fluids.

"If I thought I was putting my family's life in jeopardy, or taking away from the value of my property, I never would have signed," Mrs. Shager says.

Southwestern has vehemently denied the allegations, arguing among other things that the primary chemical contaminants identified in the lawsuit — barium, manganese and strontium — were never used at the well site. The company pointed out in a recent press release that "barium is one of the most common elements in the Earth's crust and occurs naturally in many water supplies."

"The unfortunate thing I see from all this is that it really hurts those people that may actually have good lawsuits against companies that are actually doing things they shouldn't have done," says Mark K. Boling, a vice president and general counsel for Southwestern.

The suit, which is pending in federal court, taps into a culture of mistrust and fear percolating across the Marcellus Shale.

The Environmental Protection Agency is starting a study of how fracking might affect groundwater, and some environmental groups are lobbying hard for tighter federal regulation of the industry and the chemicals it uses.

The industry says that no conclusive evidence has been produced that fracking fluids can migrate thousands of feet back up from a well bore, through multiple layers of rock and into aquifers much closer to the surface.

Some environmentalists support fracking and other means of extracting natural gas because gas emits a fraction of the carbon of either oil or coal. They also prefer it because it could replace coal as the nation's principal source of electricity and provide a lower-carbon bridge before renewable energy sources can be developed on a larger scale.

But court battles and political bickering across Susquehanna County suggest that this has little truck with many residents.

FURTHER south, in Dimock Township, more than a dozen residents have joined a lawsuit against Cabot Oil and Gas, which is accused of causing methane to bleed into residents' water wells — and in some cases, spew from the kitchen tap. The recent documentary "Gasland" featured some of these landowners — many leasing to Cabot — igniting fumes coming from their faucets..

John Hanger, Pennsylvania's environmental secretary, recently announced a \$12 million plan to pipe municipal water from Montrose down to Dimock — a solution, he said, to the community's water woes.

The plan calls for Cabot to foot the bill for the new 5.5-mile pipeline. The company has already been providing expensive water filtering systems to many residents despite what it says is a lack of any credible evidence that it caused contamination. The issue is so sensitive that Cabot has taken to using armed and uniformed escorts on some visits to residents in the area.

George Stark, a spokesman for the company brought on board in April to help deal with simmering discontent, said that much of the friction arose from the fact that oil and gas development was virtually unknown in Susquehanna before Cabot drilled its first well there in 2006.

Today, Cabot, Chesapeake and other companies have drilled nearly 200 wells in the county, with more permits pending.

The picture is further confused by less vocal homeowners here — equally exposed to gas drilling —

who embrace the gas boom.

In the basement of the historic Inn at Montrose, a group of Dimock Township residents gathered on a recent evening to relate their opposition to the planned water pipeline — and more generally to issue a defense of gas companies like Cabot. They planned, they said, to formally charter an organization called Enough Already.

Among the residents was Martha Locey, 78, who has lived on her family's farm since 1932.

"My father dug our well in 1945, and we knew it had lots of iron in it, and we thought it had something else, but we weren't sure, because it had lots of bubbles in it," Ms. Locey said. "So my nephew took it to school in the '60s, and the science teacher lit it, and it burned, so he said, 'It's methane.' "

"The truth is, our well has been that way since 1945," added Ms. Locey, who has signed an affidavit in support of the gas company's legal case. "I don't think Cabot was here back then."

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